

14 Nov 56  
Hold until  
R. & L. Subj. copy  
16 November 1956

Minifon recorder. ~~Speed variations are cited. Included~~  
~~Speed variations~~  
here is data taken on this type recorder is forwarded  
herewith for your information.



STAT

Mar 16 1912

The General Electric ZJ-14 unijunction transistor has been tested here at the laboratory to determine what can be expected from them in audio oscillator applications. The most important features of this transistor are:

1. Frequency stability of one to two percent.
2. Continuous frequency variations of the order of ten to one.
3. ~~Fast~~ Pulse or sawtooth wave shape.
4. Small number of components required.

At the present time there seems to be considerable variations in the characteristics of individual units. This makes it necessary to tailor the components in each oscillator to obtain the required frequency accuracy and stability.

It should be possible to produce a 1000 cycle reference oscillator in a package of approximately 3x2x1. This oscillator could have an overall frequency stability of <sup>+1</sup>/<sub>2</sub>% over the temperature range of 0 to ~~50~~ 50 degrees Centigrade.



STAT

1000  
Hz  
1000

PROJECT INITIATION FORM  
R&D LABORATORY

PROJECT TITLE: Fixed Frequency Reference Oscillator <sup>ELINT</sup> (SECRET) Rework  
DATE DIRECTIVE RECEIVED: 17 Oct. 1956 NOMENCLATURE: SP/IE-3  
DATE WORK STARTED ON PROJECT: 1 Nov. 56 DATE REQUIRED: No Specific Date  
PROJECT NUMBER: 2517-1 REPORT CLASSIFICATION: N.A.  
EQUIPMENT CLASSIFICATION: Unclassified AUTHORITY: SPM 6-606 (10-11-56)  
SP/IE 6-245 (12-3-56)  
SOURCE OF REQUEST: SPD  
LIAISON CONTACT:                      QUANTITY REQUIRED: 10  
PRIORITY: #3 SPD  
TYPE OF EVALUATION: "C" ASSIGNED TO: Design  
DATE SUSPENDED OR CANCELLED: N.A.  
DESCRIPTION OF PROJECT:

1. Fabricate ten Reference Oscillators based on the tuning fork prototype constructed under project 2517.
2. Incorporate the features outlined in Memo SPM 6-606.
3. Construct one additional unit for laboratory retention.

PROJECT FOLDER FILED: Room #  
Safe #  
Drawer #

Man-Hours Expended:  
Mechanical                       
Electrical                     

SIGNED                       
DATE 12-27-56

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